

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,985	06/27/2001	Allen R. Boronkay	VTI017	3804
22903	7590	02/27/2004	EXAMINER	
COOLEY GODWARD LLP			HE, AMY	
ATTN: PATENT GROUP			ART UNIT	PAPER NUMBER
11951 FREEDOM DRIVE, SUITE 1700			2858	
ONE FREEDOM SQUARE- RESTON TOWN CENTER				
RESTON, VA 20190-5061				
DATE MAILED: 02/27/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/894,985	BORONKAY ET AL.	
	Examiner	Art Unit	
	Amy He	2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 December 2003.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-36 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 27-36 is/are allowed.
 6) Claim(s) 1-26 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 09 December 2003 and 04 September 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 3/14/2003.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____

DETAILED ACTION

1. The information disclosure statement filed on March 14, 2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to the listed non-patent literature documents have not been considered.

Claim Objections

2. Claims 4 and 27 are objected to because of the following informalities:

- (1) Claim 4, line 4, "the additional lead" lacks antecedent basis.
- (2) Claim 27, line 1, replace "The apparatus" with --An apparatus--.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2, 7-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Gonring et al. (U. S. Patent No. 6,414,607).

Referring to claims 1-2, Gonring discloses an apparatus (30 in Figure 3) comprising:

a resistive element (first sensor 32, i.e. the combination of resistive element 34 and 38) positionable on a first surface;

a first lead and a second lead (2 leads for providing the 5 volts) electrically connected to the resistive element, the first and second leads collectively configured to supply a first voltage (5V);

an intermediate lead (Ground lead) electrically connected to the resistive element between the first and second leads, the intermediate lead configured to provide a second voltage (0V); and

a contact element (brush 41) positionable on a second surface, the contact element configured to contact at least a portion of the resistive element to detect a voltage at a contact position by a position detector (controller 60) which generates an output signal indicative of the position or movement of the second surface relative to the first surface (column 3, lines 1-4).

Referring to claims 7-11, Gonring discloses a second resistive element (50 and 54 in Figure 3) comprises a plurality of leads (leads connected to ground, 5 volts line and brushes as shown in Figure 3), positionable on the first surface; a second contact element (42 or 43) positionable on the second surface and capable of contacting the second resistive element, wherein the first and second surfaces are movable relative to one another in a direction, and that at least one lead (ground or the 5 volts lead) from each resistive element is substantially aligned along the direction, and wherein the

Art Unit: 2858

leads on the resistive elements are substantially offset from one along the direction (see Figure 3).

Referring to claims 16-17, Gonring discloses position sensor/ apparatus (30 in Figure 3) comprising:

a resistive element (first sensor 32 shown in Figure 3) positionable on a first surface, the resistive element formed from a first (34) and a second resistive strip (38);

a plurality of leads (1 lead connecting the ground line; 2 leads connecting to 5 volts) on each resistive strip to provide a voltage (5 volt) to each resistive strip (note that the shared ground lead are connected to both resistive strips 34 and 38, i.e. there are two leads on each resistive strip) ; and

a contact element (41) positionable on a second surface, the contact element adapted to contact at least a portion of the resistive element to detect a voltage at a contact position, the detected voltage being related to the position or movement of the second surface relative to the first surface.

Referring to claims 18-19, Gonring discloses the plurality of leads comprises a first lead (ground lead) configured to provide a first voltage (0 volts) to the first resistive strip (34), and a second lead (5 volts lead) configured to provide a second voltage (5 volts) to the second resistive strip (38).

Referring to claims 20-21, Gonring discloses a second resistive element (the combination of sensor 50 and 54) positionable on the first surface, a second contact element (brushes 42 and 43) positionable on the second surface configured to contact the second resistive element.

Referring to claim 22, Gonring discloses that the second resistive element comprises first and second resistive strips (50 and 54 in Figure 3).

Referring to claims 12 and 23, Gonring discloses a linear resistive element (see Figure 3).

Referring to claims 13-14 and 24-25, Gonring discloses that the resistive element is at least partially arcuate or circular (column 5, lines 45-50).

Referring to claims 15 and 26, Gonring discloses a first brush (42) and a second brush (43) offset from the first brush.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gonring et al. (U. S. Patent No. 6,414,607).

Referring to claims 3-4, Gonring discloses the apparatus of claim 1. Gonring does not specifically disclose a third lead electrically connected to the resistive element and adapted to supply the first voltage, and a second intermediate lead between the third lead and the first and second leads. However, Gonring does disclose that sensor 32 (with more leads) has a higher resolution than sensor 50 or 54 (column 7, lines 1-3). Therefore, it would have been obvious to a person of ordinary skill in the art at the time

Art Unit: 2858

of the invention to modify Gonring to further improve the detecting resolution of sensor 32 by using a third lead and a second intermediate lead, so that the position sensor of Gonring is able to distinguish even smaller changes in movement of the throttle handle and obtain a higher resolution in position detection (column 5, lines 2-7).

Referring to claims 5-6, Goring discloses the apparatus of claim 1, wherein the first and second leads are electrically connected to a voltage supply (5 volts) and the intermediate lead is connected to ground. Goring does not specifically disclose that the connection to the voltage supply and ground can be switched. However, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Gonring to connect the first and second leads to ground and connect the intermediate lead to the 5 volts instead, since switching the two connections does not change the functionality of the position sensor, and that it has been held to be within the general skill of a worker in the art to select a known tool for a known purpose on the basis of its suitability for the intended use as a matter of obvious design choice *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA).

Response to Arguments

5. Applicant's arguments with respect to claims 1-²⁶_A have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

6. Claims 27-36 are allowed.

Art Unit: 2858

Claims 27-30 are allowable because none of the prior art discloses an apparatus comprising a voltage controller configured to selectively provide a voltage to each of a plurality of portions of a resistive element according to a position of a contact element relative to the resistive element, and in the combination as claimed.

Claims 31-33 are allowable because none of the prior art discloses an apparatus comprising a contact element positionable on a second surface for providing a second voltage to the resistive element; an intermediate lead between a pair of leads and configured to detect a voltage, and in the combination as claimed.

Claims 34-36 are allowable because none of the prior art discloses an apparatus comprising a sensor having a resistive element electrically connected to a second plurality of leads at locations intermediate to a first plurality of leads configured to provide a second voltage, and in the combination as claimed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 2858

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy He whose telephone number is (703) 305-3360. The examiner can normally be reached on 8:30am-5pm Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, N. Le can be reached on (703) 308-0750.

The official Fax numbers for the organization are (703-872-9318) Before-Final and (703-872-9319) After-Final Office actions. Any inquiry of a general nature relating to this application should be directed to the receptionist at (703) 305-4900.

AH
atf
February 20, 2004


N. Le
Supervisory Patent Examiner
Technology Center 2800